



## Easing back pain in the pharmacy

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### Introduction

Back pain is common and more than 80% of people have at least one episode of lower back pain in their lifetime. Although most episodes of back pain are not serious and resolve without treatment, lower back pain can be uncomfortable and is a leading cause of disability. It is also a common reason for seeking medical treatment and for absence from work.

### Back pain overview

Back pain most commonly occurs in the lower back, also called the lumbar region of the spine. Lumbago (lower back pain) usually results from a problem with one or more parts of the lower back such as:

- Muscles
- Ligaments
- Nerves
- Vertebrae
- Nearby organs such as the kidneys

Lower back pain can be classified based on the duration of pain as either acute (pain lasts between a few days and 4 weeks), subacute (pain lasts between 4 and 12 weeks), and chronic when the pain lasts for 12 weeks or longer.

### Causes of back pain

Lower back pain may be triggered by spinal movement, classified as mechanical lower back pain, or can be caused by disease such as spinal cancer, classified as organic lower back pain. When the cause of the back pain is unknown, it is classified as non-specific or idiopathic back pain. The following are some common causes of lower back pain:

- Ligament sprains and muscle or tendon strains often related to overuse (e.g. after exercise) or incorrect lifting of heavy objects, or a sudden awkward movement.
- Structural problems such as
  - degenerative disc disease (small cracks and tears in discs and/or loss of fluid in the discs)
  - bulging, herniated or slipped discs (may result in pressure on a nerve, e.g. sciatica leading to pain, tingling or weakness that extends down to the leg)
  - spinal stenosis (narrowing of the space inside the vertebrae)
  - spondylolisthesis (one of the vertebrae slides forward out of alignment)
  - osteoporosis (loss of bone density that can lead to fractures in the vertebrae)
  - abnormal curvature of the spine
- Arthritis (inflammatory conditions) such as osteoarthritis (known as spondylosis in the back), rheumatoid arthritis and ankylosing spondylitis.

### Risk factors

Some patients are at increased risk of developing back pain, including people who:

- Work in a seated position for prolonged hours
- Have a physically strenuous job
- Don't exercise
- Take part in high impact activity without warming up or stretching first
- Smoke
- Have obesity
- Are older
- Are female
- Have a stressful job
- Have depression or anxiety

## Treatment

Unless acute lower back pain is caused by a serious medical condition (which is uncommon), it usually resolves quickly. There are some simple measures that can help relieve pain while waiting for recovery.

Studies have shown that movement relieves muscle spasms and prevents loss of muscle strength. People who remain active recover faster, have less pain and disability, and reduced time off work. It is important to avoid strenuous activities and sport whilst in pain, but it is recommended to continue with normal day to day activities and light exercise such as walking, swimming, or cycling. Patients may be advised to avoid any exercise or movement that causes pain. Bed rest is not recommended. Application of heat or cold packs may also reduce pain but warn patients to be careful to avoid burning the skin with a pack or pad that is too warm or too cold.

Medication available over-the-counter (OTC) may relieve pain during episodes of lower back pain. Patients should be instructed to use analgesics regularly to obtain full effect rather than taking them as needed. Treatment should be provided only for five days, after which time patients should be advised to see their doctor. A wide range of combination products are available in South Africa, and it is important to always refer to the manufacturer's package insert for contraindications, precautions, and dosing instructions.

Table I provides more information on some OTC treatment options available in South Africa.

**Table I:** Some OTC treatment options for pain available in South Africa

|                    | Dose to treat pain  | Maximum dose     | Comments   |
|--------------------|---|------------------|--|
| <b>Paracetamol</b> |   |                  |  |
| Adults             | 500–1 000 mg every 4–6 hours<br>Extended relief: 650–1 300 mg every 8 hours | 4 g per day      | May cause hepatotoxicity<br>Avoid in patients with severe liver or kidney disease<br>Avoid alcohol   |
| <b>Aspirin</b>     |   |                  |  |
| Adults             | 300–900 mg every 4–6 hours  | 4 g per day      | Gastrointestinal (GI) irritation may occur<br>Be aware of possible hypersensitivity reactions<br>Aspirin should be avoided in children under 16 years of age<br>Aspirin has been implicated in Reye's syndrome, a rare but serious illness in children and teenagers with chickenpox and influenza |
| <b>Ibuprofen</b>   |   |                  |  |
| Adults             | 600–1 200 mg per day in divided doses                                       | 1 200 mg per day | Use with caution in patients with cardiovascular disease<br>Possible cross-sensitivity in patients with aspirin hypersensitivity<br>Administration with food is recommended to reduce the risk of GI irritation  |
| <b>Codeine</b>     |   |                  |  |
| Adults             | Given at doses between 8 and 20 mg every 6–8 hours in combination products  | 360 mg per day   | Constipation is a possible side effect, especially in elderly patients<br>Can cause respiratory depression and drowsiness, contraindicated in patients with asthma, avoid driving if affected  |

**Table II:** Some topical preparations for treatment of muscle aches and pains

| Active ingredient                         | Strength  | Directions   |
|---|---|--|
| Methylsalicylate (wintergreen)            | Available in concentrations between 10% and 60% | Apply 3–4 times daily  |
| <i>Capsaicin</i>                          | 2.7 mg / 1 ml cream                             | Apply 3–4 times daily  |
| <i>Arnica montana</i>                     | 7 g/100 g of gel                                | Apply as soon as possible after injury and reapply once or twice daily |
| Ibuprofen                                 | 50 mg per 1 g of gel                            | Apply up to 3 times daily  |
| Benzylamine                               | 3 g per 100 g of gel                            | Apply 3–6 times daily  |
| <i>Aescin</i> and diethylamine salicylate | 1 g and 5 g respectively in 100 g of gel        | Apply several times daily  |
| Flurbiprofen                              | 40 mg per patch                                 | Apply 1 patch at a time, every 12 hours                                |
| Diclofenac sodium                         | 1 g/ 100 g per day                              | Apply 3-4 times daily  |

Topical pain relievers available as gels, creams and ointments may also bring relief, not only due to the ingredient in the product, but also because of the act of massaging that increases blood flow into the affected area and stimulates the nerves, leading to a reduction in the sensation of pain. Table II provides some of the OTC topical preparations available in South Africa.

Topical formulations may contain more than one active ingredient and patients should be warned that they can cause local reactions. Avoid application to irritated or damaged skin. Patients should always wash their hands after application of topical products to avoid later accidental transference into the eye. Patients that live alone may prefer a spray to ease self-application in places that are difficult to reach.

## When to refer

Patients need to be referred to a doctor if any of the following symptoms occur as these may indicate a more serious medical condition:

- Numbness, tingling or weakness in one or both legs
- Loss of bowel or bladder control
- Intense, constant pain that gets worse at night
- Unexplained weight loss
- Onset of pain following trauma such as a fall or blow to the back

- Presence of fever
- Pain that does not get better within four weeks

## Conclusion

Although lower back pain occurs commonly, most episodes are not serious and resolve without treatment. Considering all patient factors, including other medicine use, an appropriate analgesic may be recommended to help alleviate pain during the episode. Patients should avoid bed rest and remain active to accelerate recovery. It is important to also consider and reduce risk factors where possible and refer patients if any symptoms indicate other serious medical conditions.

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